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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,036	12/21/2000	Earl Hubbell	3363	9135
22886	7590	04/20/2004	EXAMINER	
AFFYMETRIX, INC ATTN: CHIEF IP COUNSEL, LEGAL DEPT. 3380 CENTRAL EXPRESSWAY SANTA CLARA, CA 95051			MARSCHER, ARDIN H	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

**Application No.**

09/746,036

**Applicant(s)**

HUBBELL, EARL

**Examiner**

Ardin Marschel

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Applicant's arguments, filed 1/28/04, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

### **TITLE**

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The present title is directed only to computer software products whereas, in contrast, computer-implemented methods, systems, and computer readable media are being claimed.

### **NON-STATUTORY SUBJECT MATTER UNDER 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

This rejection is maintained and reiterated from the previous office action, mailed 7/28/03, regarding claims 1-7 and now additionally applied to claims 8-21.

Consideration of the "Computer-Related Inventions" section of the MPEP at section 2106, Part IV, subpart B, has revealed that the instant claims are directed to non-statutory subject matter without requiring performance of a result outside of a computer, system, or computer readable media. Thus, the manipulation of data or

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conversion of data, in this case analysis of the results of gene expression experiments, is the claimed subject matter without any physical transformation outside of a computer and therefore is non-statutory. Applicant argues that the amending of the claims to cite “a computer-implemented method” in the preamble and citation of “analyzing the results...” in the body of the claim and that such analysis is a practical application in the technological arts. In response, said MPEP section cites examples of statutory vs. non-statutory subject matter to illustrate the difference(s). For example, noise analysis subject matter, such as performed on a computer is non-statutory vs. noise filtering subject matter which is exemplified as being statutory. The noise analysis, even if computer implemented, is reasonably interpreted as only data manipulation practice and thus non-statutory. In contrast, noise filtering subject matter is directed to a physical transformation of the noise and thus statutory. This exemplification is also reasonably interpreted as being illustrative of what is meant by a “practical” application in the arts as being directed to some type of actual physical transformation. It is also noted that placing non-statutory on a computer readable medium or in a computer system where the invention lies in the non-statutory practice is also deemed to be non-statutory.

### **VAGUENESS AND INDEFINITENESS**

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 8, and 15 remain vague and indefinite as to what the method of "analysis" is intended to accomplish. Analysis in the claims is directed to determining of couplings without any indication of what manner of coupling is meant or what aspect of such coupling is determined. Parameters such as levels, intensities, and scales are cited in the claims but without indicating what couples them as being determined in said analysis. This rejection is also applied to claims which are either directly or indirectly dependent from the above independent claims thus also containing the above unclarities. Applicant argues said independent claims have been amended via the phrase "analyzing the results of...". In response this limits the target of analysis to gene expression experiments but yet lacks any clarification as to what the analysis is directed to regarding what coupling determination practice is meant in the claims.

In claims 1, 8, and 15 and those dependent therefrom the metes and bounds of the practice of linear programming as applied to the instant analysis practice are unclear. Linear programming is cited in the instant specification on page 4, lines 9-10, as a practice that may be used to maximize the true effect etc. but is not specifically defined as a practice to such maximizing. The phrase "In some embodiments..." is set forth on page 4, line 11, but does not include there or thereafter any clear and concise linear programming practice. It is noted that 35 U.S.C. § 112, second paragraph, requires a clear and concise setting forth of the claimed invention. This clarity or conciseness has not been supplied as to what linear programming practice is meant regarding the instant claim practice. Clarification via clearer claim wording is requested.

#### **PRIOR ART**

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 8, and 15 are rejected under 35 U.S.C. 102(e)(2) as being clearly anticipated by Balaban (P/N 6,510,391).

This rejection is reiterated and maintained from the previous office action, mailed 7/28/03, with added disclosure therein cited as discussed below. Applicant argues that linear programming is instantly claimed but not disclosed in Balaban. In response the citation of linear programming is not instantly defined but is cited in the instant specification on page 4, lines 9-10, regarding maximizing the true effect etc. Thereafter calculational details are supplied for minimizing the effect of cross-hybridization. A reasonable interpretation of said instant citations is that programming of calculations for minimizing cross-hybridization effect in a linear fashion through such calculations is an embodiment of the instant claims. Balaban discloses the performance of such linearly programmed calculational steps as detailed in column 8, line 54, through column 13, line 49. In particular, cross-hybridization is minimized via calculational steps in Balaban in column 9, line 55, through column 10, line 55. Thus, a reasonable interpretation of both Balaban disclosures compared to the instant application supports this rejection.

#### **INFORMALITIES**

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The disclosure is objected to because of the following informalities:

In claim 19, the phrase "17where" lacks a space between "17" and "where".

In the specification on page 3, last line, the word "whre" appears to be misspelled.

Appropriate correction is required.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (571) 272-0718. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

April 16, 2004

*Ardin H. Marschel* 4/16/04  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER